

## CLAIMS

What is claimed is:

1. A power planer for planing a top surface of a workpiece comprising:  
a base assembly;  
a carriage assembly disposed above the base assembly, the carriage assembly comprising a cutterhead assembly, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;  
a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;  
a material removal gauge disposed on the carriage assembly;  
a switch disposed on the carriage assembly; and  
a height scale disposed on the base assembly;  
wherein the material removal gauge, the switch and the height scale are on the front side of the power planer, and the hand crank is substantially on the front half of the power planer.
2. The power planer of Claim 1, wherein the switch and the hand crank are on the same side half.
3. The power planer of Claim 1, further comprising a speed selector handle disposed on the carriage assembly, and disposed on the front side of the power planer.
4. The power planer of Claim 1, further comprising a carriage height mechanism disposed on the carriage assembly, and disposed on the front half of the power planer.

5. A power planer for planing a top surface of a workpiece comprising:

a base assembly;

a carriage assembly disposed above the base assembly, the carriage assembly comprising a cutterhead assembly, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;

a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;

a material removal gauge disposed on the carriage assembly;

a switch disposed on the carriage assembly; and

a height scale disposed on the base assembly;

wherein the cutterhead assembly has a main body, and three knives disposed on the main body.

6. The power planer of Claim 5, wherein at least one of the three knives is attached to the body with at least six screws.

7. The power planer of Claim 5, wherein at least one of the three knives is attached to the body with seven screws.

8. The power planer of Claim 5, further comprising a cutterhead lock mechanism for locking the main body in a predetermined position.

9. The power planer of Claim 8, wherein the cutterhead lock mechanism locks the main body so that one of the three knives is substantially horizontal.

10. A power planer for planing a top surface of a workpiece comprising:

a base assembly;

a carriage assembly disposed above the base assembly, the carriage assembly comprising a motor, a cutterhead assembly driven by the motor, the cutterhead assembly being coupled to a transmission, a first roller assembly drivingly connected to the transmission, a second roller assembly drivingly connected to the first roller assembly, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;

a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;

a material removal gauge disposed on the carriage assembly;

a switch disposed on the carriage assembly; and

a height scale disposed on the base assembly.

11. The power planer of Claim 10, wherein the first roller assembly is drivingly connected to the transmission via a chain.

12. The power planer of Claim 11, further comprising a chain tensioner mechanism disposed on the carriage assembly for maintaining substantially constant tension on the chain.

13. The power planer of Claim 10, wherein the second roller assembly is drivingly connected to the first roller assembly via a chain.

14. The power planer of Claim 13, further comprising a chain tensioner mechanism disposed on the carriage assembly for maintaining substantially constant tension on the chain.

15. A power planer for planing a top surface of a workpiece comprising:

a base assembly;

a carriage assembly disposed above the base assembly, the carriage assembly comprising a motor, a cutterhead assembly driven by the motor, a first roller assembly drivingly connected to the cutterhead, first and second springs disposed between the carriage assembly and the first roller assembly, a second roller assembly drivingly connected to the first roller assembly, third and fourth springs disposed between the carriage assembly and the first roller assembly, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;

a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;

a material removal gauge disposed on the carriage assembly;

a switch disposed on the carriage assembly; and

a height scale disposed on the base assembly;

wherein the first and third springs provide unequal forces.

16. A power planer for planing a top surface of a workpiece comprising:

a base assembly;

a carriage assembly disposed above the base assembly, the carriage assembly comprising a motor, a cutterhead assembly driven by the motor, a first roller assembly

drivingly connected to the cutterhead, a second roller assembly drivingly connected to the first roller assembly, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;

a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;

a material removal gauge disposed on the carriage assembly;

a switch disposed on the carriage assembly; and

a height scale disposed on the base assembly;

wherein the first roller assembly is lower than the cutterhead assembly.

17. The power planer of Claim 16, wherein the second roller assembly is lower than the cutterhead assembly.

18. The power planer of Claim 16, wherein the first roller assembly is lower than the second roller assembly.

19. A power planer for planing a top surface of a workpiece comprising:

a base assembly including at least one guide post;

a carriage assembly disposed above the base assembly and threadingly engaging the at least one guide post, the carriage assembly comprising at least one nut assembly threadingly engaging the corresponding at least one guide post, a motor, and a cutterhead assembly driven by the motor, the carriage assembly being vertically movable to change distance between the base assembly and the carriage assembly;

a hand crank attached to the carriage assembly for changing the distance between the base assembly and the carriage assembly;

a material removal gauge disposed on the carriage assembly;

a switch disposed on the carriage assembly; and

a height scale disposed on the base assembly;

wherein the at least one nut assembly comprises a main body threadingly engaging the corresponding at least one guide post, a lower plate threadingly engaging the corresponding at least one guide post, at least one screw extending through the lower plate and threadingly engaging the main body, and a spring disposed between the main body and the lower plate.

20. The power planer of Claim 19, further comprising a thrust bearing disposed on the main body.